

What is claimed is:

1. A fabricating method of an optic protection film, which comprising the steps of :

5 (a) preparing a substrate, a resin A, and a resin B, wherein the resin A comprising at least two different conductive particles in grain size, one conductive particle is with bigger grain size and another conductive particle is with smaller grain size;

10 (b) coating the resin A onto the substrate and proceeding solidification to form a thin film on the resin A, wherein the thickness of the resin A is less than the grain size of the conductive particles with bigger grain size, but greater than the grain size of the conductive particles with smaller grain size; and

15 (c) coating the resin B onto the resin A film and proceeding solidification to form a thin film on the resin B, wherein at least upper rims of partial bigger conductive particles of the conductive particles with bigger grain size are able to touch to or expose in the exterior of the upper surface of the resin B to contact external environment.

20 2. The fabricating method of the optic protection film according to claim 1, wherein the grain size of the conductive particles with bigger grain size described in step (a) is 0.5~7 μ m, and the grain size of the conductive particles with smaller grain size is 0.1~0.5 μ m.

25 3. The fabricating method of the optic protection film according to claim 1, wherein the conductive particles are composed of one of antimony tin oxide (ATO) and indium-tin oxide (ITO) alternatively.

4. The fabricating method of the optic protection film according to claim 1, wherein the substrate is composed of one of cellulose triacetate (TAC) and Poly-Ethylene (PET) alternatively.

30 5. The fabricating method of the optic protection film according to claim 1, wherein the resin A is composed of one of 1-Butanol, isopropanol (IPA), and acrylic resin.

6. The fabricating method of the optic protection film according to claim 5, wherein the solid content of the resin A is 5~25%.

7. The fabricating method of the optic protection film according to claim 1, wherein the solidification process described in the step (b) and the step (c) include a hot bake step to evaporate the solvent of the resin, the operating temperature of the hot bake step is among 50~95°C and the hot bake time is among 0.5~5min.

8. The fabricating method of the optic protection film according to claim 1, wherein the solidification process described in the step (b) and the step (c) also include a step of resin polymerization of cross-link by ultraviolet light, and wherein the intensity of ultraviolet light is among 150~1000 mJ/cm²

9. The fabricating method of the optic protection film according to claim 1, wherein the resin B is composed of acrylic resin.

10. The fabricating method of the optic protection film according to claim 1, wherein the resin B includes tiny particles.

11. The fabricating method of the optic protection film according to claim 10, wherein the tiny particles is silicon oxide (silica).

12. The fabricating method of the optic protection film according to claim 10, wherein the solid content of the resin B is 45~50%.

13. The fabricating method of the optic protection film according to claim 10, wherein the grain size of the tiny particles is among 0.1~1.0μm.

14. A structure of a optic protection film comprises:

a substrate;

a resin A film, formed on the substrate, includes a plurality of conductive particles with bigger grain size and a plurality of conductive particles with smaller grain size, the thickness of the resin A film is between the grain size of the conductive particles with bigger grain size and that of the conductive particles with smaller grain size; and

a resin B film, formed on the resin A film, and at least the upper rims of partial conductive particles with bigger grain are able to touch to or expose

in the exterior of the upper surface of the resin B to contact external environment.

15. The structure of the optic protection film according to claim 14, wherein the substrate is composed of one of cellulose triacetate (TAC) and Poly-Ethylene (PET) alternatively.

16. The structure of the optic protection film according to claim 14, wherein the grain size of the conductive particles with bigger grain size is $0.5\sim 7\mu\text{m}$, and the grain size of the conductive particles with smaller grain size is about $0.5\mu\text{m}$.

17. The structure of the optic protection film according to claim 14, wherein the conductive particles are composed of one of antimony tin oxide (ATO) and indium-tin oxide (ITO) alternatively.

18. The structure of the optic protection film according to claim 14, wherein the resin B includes a plurality of tiny particles, and the tiny particles are distributed in the neighborhood of the upper surface of the resin B film.

19. The structure of the optic protection film according to claim 14, wherein the tiny particles are silicon oxide (silica), and the grain size of the tiny particles is among $0.1\sim 1.0\mu\text{m}$.

20. A structure of a optic protection film comprises:

a substrate;

a resin A film formed on the substrate;

a resin B film formed on the resin A film;

a plurality of conductive particles with smaller grain size, wherein the grain size of the conductive particle is less than the thickness of the resin A film, and the conductive particles with smaller grain size are distributed only in the resin A film; and

a plurality of conductive particles with bigger grain size, wherein the grain size of the conductive particle is bigger than the thickness of the resin A film, the conductive particles with bigger grain size are distributed in the range of the resin A film and resin B film, and at least the upper rims of

partial conductive particles with bigger grain are able to touch to or expose in the exterior of the upper surface of the resin B to contact external environment.

21. The structure of the optic protection film according to claim 20,
5 wherein the resin B film includes tiny particles comprised of silica, and the tiny particles are distributed in the neighborhood of the upper surface of the resin B film.

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